SHKOL'NIK, V.

Electronic hardness gauge. V pom. radioliub. no.11:32-42 '61.
(MIRA 15:6)
(Hardness--Measurement) (Electronic apparatus and appliances)
(Measuring instruments)

SHKOL'NIK, V.M., inzh.

Portable four-channel tensiometer. Izv. vys. ucheb. zav.; gor. zhur. no.11:108-116 1959. (MIRA 14:5)

1. Sverdlovskiy radiotekhnicheskiy tekhnikum imeni A. S. Popova. Rekomendovana kafedroy gornoy elektrotekhniki Sverdlovskogo gornogo instituta.

(Tensiometers)

30890
S/118/61/000/012/002/003
D221/D305

18000

AUTHOR: Shkol'nik, V.M., Engineer

TITLE: An automatic instrument for quality control of heat treatment of steel components

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 12, 1961, 36-40

TEXT: The author describes an automatic unit which he developed. It uses the non-destructive method of structure control and also the related hardness of steel components. The author directed the work on the electronic part, whereas the mechanical section was made by the 6th Gosudarstvennyy podshipnikovyy zavod (6th State Ball-bearing Factory), where it was tested. Its operating principle is based on the relationship between the magnetic and electric properties of a substance and its chemical composition as well as crystallographic structure.

Card 1/4

An automatic instrument ...

The hardness of component depends on the latter. The automatic control consists of measuring the magnetic permeability, to which hardness is related, by comparing to a standard. This is achieved with two inductors, whose cores are formed by the standard and the specimen. Their coils are connected to a bridge. The unbalance voltage is proportional to the difference in their permeability (and, thus, hardness). The phase of output voltage is related to the hardness of the specimen. The bridge feeds a three-cascade amplifier, the last stage being phase sensitive. The anodes are connected to signal lamps and solenoids of the sorter. A detailed description is given of the operation of this automatic sorter. The supply is ensured by two rectifiers. One is based on germanium diodes and voltage stabilizing valves. The other circuit incorporates germanium diodes and provides the low voltage for solenoids and counters. The input of the bridge is balanced by a valve voltmeter. When the active and reactive components of the input

Card 2/4

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D221/D305

An automatic instrument ...

are balanced, then the output current in the milliammeter is zero. This produces two opposite currents in the output which cancel each other. In the case of differences in hardness, there is a voltage generated in the secondary of the transformer, and a differential current will pass through the instrument. The change in the sign of hardness of the specimen, as compared to the standard, causes a phase shift in the output. This is compared in a phase displacement of 45° obtained by the condenser divider. The automatic unit comprises a hopper which feeds rollers at certain intervals along a tube, and into the transducer. The sorting device is mounted underneath the latter. It separates components into three categories: good, too soft and too hard. The sleeve of the transducer is provided with slots, where lags for component rejection are placed. Application of interchangeable bloc of transducers and the feed system permit a rapid resetting for other types of workpieces. The present

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D221/D305

An automatic instrument ...

output of 2000/hrs can be increased to 5-6000, by changing the time constant of the grid circuit of the electronic time relay. In addition the feeding and disposition of the lags (gates) in the sorter should also be adjusted. Tests proved that the unit operates reliably. The indications are not related to the diameter or height of components within the permitted limits. Some errors are introduced by the scatter of chamfer sizes. There are 3 figures.

Card 4/4

SHKOL'NIK, V.M., inzh.

Automatic unit for controlling the quality of the heat treatment of steel parts. Mekh. i avtom.proizv. 15 no.12:36-40 D '61. (MIRA 14:12)

(Steel--Heat treatment) (Automatic control)

SKOLNIK, V.M. [Shkol'nik, V.M.]

An automatic machine for controlling the quality of the thermal treatment of steel castings. Analele metalurgie 16 no.3:159-167 Jl-S '62.

SHKOL'NIK, V.M., inzh.

Use of four-terminal networks for balancing the input bridges of tensiometer amplifiers. Izv. vys. ucheb. zav.; gor. zhur. 6 no.4:144-157 '63. (MIRA 16:7)

1. Sverdlovskiy radiotekhnicheskiy tekhnikum imeni Popova. Rekomendovana kafedroy avtomatizatsii proizvodstvennykh protsessov.
(Amplifiers (Electronics)) (Tensiometers)

[illegible], N.V., inzh.; [illegible], N.N., inzh.; [illegible], [illegible], inzh.; SHKOL'NIK, Ya.Sh., inzh.

[illegible] of casting slag products with superheated melt. Sbor. trud. Sverd. nauch.-issl. inst. po stroi. no.10:79-86 '63. (MIRA 17:10)

SHLAPNIK, Ya. G.; TOLOCHKO, A.F.; PILYUGIN, G.T.

Pyridine bases of brown coal tar in Transcarpathia. Ukr. khim. zhur. 30 no.7:731-733 '64 (MIRA 18:1)

1. Chernovitskiy gosudarstvennyy universitet.

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 148

TOPIC TAGS: ultrasonic flaw defection OR ~~ultrasonic~~ quality control, ~~water containing contact liquid, contact liquid composition, rough machined surface inspection~~

ABSTRACT: This Author Certificate introduces a liquid medium for ultrasonic detection. To assure effective quality control, especially in inspection of rough surfaces, the liquid contains 0.8—2.0% polyacrylamide, 0.4—1.0% sodium nitrate and 97—98.8% water. [WW]

SUB CODE: 11,13/ SUBM DATE: 22Nov65/ ATD PRESS: 5110

Card 1/1 UDC: 620.179.16

L 52097-65 EPF(c)/EPR/EWP(j)/EWT(m)/T/EWP(v) Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AP5015266 UR/0286/65/000/009/0048/0048

29

AUTHORS: Dombrovskiy, A. V.; Shkol'nik, Ya. Sh.; Shkol'nik, R. S. B

TITLE: Cementing composition based on aqueous solution of polyacrylamide. Class 22, No. 170601

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 48

TOPIC TAGS: cement, plywood, polyacrylamide, hydrochloric acid, ammonium compound

ABSTRACT: This Author Certificate presents a cementing composition based on an aqueous solution of polyacrylamide and used in producing plywood sheets. To increase the strength of cemented plywood joints, a mixture of urotropine and a mineral acid (for instance, hydrochloric acid) or a solution of free aldehyde and an acid salt (ammonium chloride) is added to the aqueous solution of polyacrylamide.

ASSOCIATION: none

SUBMITTED: 14Oct63 ENCL: 00 SUB CODE: GC,MT

NO REF SOV: 000 OTHER: 000

Card 1/1 mb

SHKOL'NIK, Ye.I.

DANILOVA, M.K.; IVANOVA, N.M.; KALININ, T.V.; PERELYGINA, L.I.; SALMANOVA, Ye.S.; SHKOL'NIK, Ye.I.; SHLEYFMAN, Kh.I.; STOLYAROVA, A.I., red.; SERADZSKAYA, P.G., tekhn.red.

[Economy of Voronezh Province; a statistical manual] Narodnoe khoziaistvo Voronezhskoi oblasti; statisticheskii sbornik. [Voronezh] Voronezhskoe knizhnoe izd-vo, 1957. 139 p. (MIRA 11:3)

1. Voronezh (Province). Statisticheskoye upravleniye. 2. Statisticheskoye upravleniye Voronezhskoy oblasti (for all, except Stalyarova, Seradzskaya). 3. Nachal'nik Statisticheskogo upravleniya (for Stolyarova)
(Voronezh Province--Statistics)

IVANOVA, N.M.; KOZHINA, A.D.; PERELYGINA, L.I.; TARASOVA, V.A.; FURSOVA, Ye.I.; CHEREZOVA, R.S.; SHKOL'NIK, Ye.I.; SHLEYFMAN, Kh.I.

[Economy of Voronezh Province in 1960; collection of statistics] Narodnoe khoziaistvo Voronezhskoi oblasti v 1960 godu; statisticheskii sbornik. Voronezh, Voronezhskoe otd-nie Gosstatizdata, 1961. 139 p. (MIRA 15:6)

1. Voronezh. Oblastnoye statisticheskoye upravleniye.
(Voronezh Province--Economic conditions)

SHKOL'NIK, Ye.S.

Improving drawing instruction in secondary schools. Politekh. obuch. no.1:56-57 Ja '59. (MIRA 12:2)

1. Leningradskoye khudozhestvenno-graficheskoye pedagogicheskoye uchilishche.
(Mechanical drawing--Instruction)

SHKOL'NIK-YARROS, Ye. G.

Shkol'nik-Yarros, Ye. G. "Motor disturbances in injuries to the pre-motor zone following military brain traumas", In the collection: Nevrologiya voyen. vremeni, Vol. 1, Moscow, 1949, p. 189-202.

SO: U-411, 17 July 1953, (Letopis 'Zhurnal 'nykh Statey, no. 20, 1949)

ZVORYKIN, V.P.; SHKOL'NIK-YARROS, Ye.G.

Numerical data on the relationship of the peripheral part of the visual analysor to cerebral ends of the analysors in a number of vertebrates. Arkh. anat., Moskva 30 no.5:43-47 Sept-Oct 1953. (CIML 25:4)

1. Of the Institute of the Brain (Director -- Prof. S. A. Sarkisov, Active Member AMS USSR), Ministry of Public Health USSR.

SHKOL'NIK-YARROS, Ye.G.

Morphology of the visual analysor. Zhur. vys. nerv. deiat. 4 no.2: 289-304 Mr-Ap '54. (MLRA 7:10)

1. Laboratoriya neyrogistologii Instituta mozga Ministerstva Zdravookhraneniya SSSR.
(BRAIN, anatomy and histology, visual center)

SHKOL'NIK-YARROS, Ye.G.

Structure of the cerebral end of the visual analysor in Cercopithecidae. Probl. fiziol.opt. 11:162-175 '55. (MLRA 9:6)

1. Laboratoriya neyrogistologii Instituta mozga Ministerstva zdravookhraneniya SSSR.
(CEREBRAL CORTEX, anatomy and histology, visual area in monkeys (Rus))

EXCERPTA MEDICA SEC 8 Vol 12/2 Neurology Feb 59

745. SOME VARIATIONS OF THE AXO-DENDRITIC CONTACTS IN THE CEREBRAL CORTEX OF ANIMALS (Russian text) - Shkolnik-Yarros E. G. Brain Inst., USSR Acad. of Med. Scis, Moscow - PROBL. MORFOL. NERV. SIST. 1956 (51-58) Illus. 7

The morphologic characteristics of the axo-dendritic connections were studied in the visual area of the cortex in rabbits, dogs and monkeys; the chrome-silver impregnation method was used. The finest structures of axonal and dendritic ramifications representing the synaptic formations of the nerve cells are described, and various types of axonal and dendritic endings. Variations in the mode of contact (enveloping, duplicating, etc.) between axons and dendrites with neighbouring or other cells of the cortex are described. The descriptions are illustrated with microphotographs. The advantages of the chrome-silver impregnation method are stressed, which, together with neurofibrillar methods, may provide suitable material for study of the multiplicity and variability of cortical contacts.

Zhukova - Moscow (S)

SHKOL'NIK-YARROS, Ye.G.

Descending fibers in the visual area of the cortex [with summary in English]. Zhur.vys.nerv.deiat. 8 no.1:123-136 Ja-F '58. (MIRA 11:3)

1. Laboratoriya neyrogistologii Instituta mozga AMN SSSR, Moskva.
(CEREBRAL CORTEX, physiology,
efferent visual fibers (Rus)

SHKOL'NIK-YARROS, Ye.G.

Neuron structure of the visual analysor. Probl.fiziol.opt. 12:429-438 '58 (MIRA 11:6)

1. Laboratoriya neyrogistologii Instituta mozga AMN SSSR.
(EYE--INNERVATION)

SHKOL'NIK-YARROS, Ye.G.

"Quantitative study of the visual cortex" [in German] by Herbert Haug. Reviewed by E.G. Shkol'nik-IArros. Arkh.anat.gist. i embr. 36 no.1:110-111 Ja '59. (MIRA 12:3)
(CEREBRAL CORTEX)
(VISION)
(HAUG, HERBERT)

SHKOL'NIK-YARROS, Ye.G. (Moskva, G-117, 2-y Truzhennikov per., 4,kv.61)

Neurons of the visual cortex in man. Arkh.anat.gist.i emb:. 38 no.2: 24-38 F '60. (MIRA 14:6)

1. Laboratoriy neyrogistologii (zav. - prof. G.I.Polyakov) Instituta mozga AMN SSSR.

(CEREBRAL CORTEX)

SHKOL'NIK-YARROS, Ye.G.

Some forms of interneuronal connections in the system of the visual analyzer. Zhur. vys. nerv. deiat. 11 no.4:680-689 Jl-Ag '61. (MIRA 15:2)

1. Laboratory of Neurohistology, Institute of Brain, U.S.S.R. Academy of Medical Sciences, Moscow.
(VISION)

SHKOL'NIK-YARROS, Ye.G. (Moskva, G-117, 2-y Truzhenikov per., 4, kv.61)

Structure of the visual analysor in relation to the problem of color vision. Arkh. anat. gist. i embr. 42 no.2:12-30 F '62. (MIRA 15:2)

1. Laboratoriya neyrogistologii (zav. - prof. G.I.Polyakov) Instituta mozga AMN SSSR.

(VISION) (COLOR SENSE)

SKREBITSKIY, V.G.; SHKOL'NIK-YARROS, Ye.G.

Representation of the visual analysor in the cerebral cortex. Zhur. vys. nerv. deiat. 14 no.2:277-286 Mr-Ap '64. (MIRA 17:6)

1. Laboratories of Electrophysiology and Neurohistology, Institute of Brain, U.S.S.R. Academy of Medical Sciences.

BAZI[illegible], T.V.; PORTNOVOV, V.V.; SHVOL'NIK-YARMOS, Ye.G.

Structural and histochemical characteristics of the corpus genitulatum laterale in Primates. Zhur. vys. nerv. deiat. 14 no. 4:707-713 Jl-Ag '64. (MIRA 17:12)

1. Laboratory of Histochemistry and Neurohistology, Brain Institute, U.S.S.R. Academy of Medical Sciences, Moscow.

SHKOL'NIK-YARROS, Ye.G.

Some apparatus of interneuronal connections in the cerebral cortex. Zhur. vys. nerv. deiat. 15 no.6:1063-1071 N-D '65.
(MIRA 19:1)

1. Laboratoriya neyrogistologii Instituta mozga AMN SSSR.
Submitted June 21, 1965.

ACC NR: AM6015332 Monograph UR/

Shkol'nik-YAross, YEkaterina Grigor'yevna

Neurons and interneuronal connections. Visual analyzer (Neyrony i' mezhneyronnyye svyazi. Zritel'nyy analizator) [Leningrad] Izd-vo "Meditsina," 1965. 226 p. illus., biblio. 2200 copies printed.

TOPIC TAGS: neuron, cerebral cortex, vision

PURPOSE AND COVERAGE: The book is devoted to the structure of neurons and interneuronal connections of the visual cortex and the lateral geniculate body in different animals and man. New data are presented concerning the localization of the visual system in the brain cortex. A hypothesis is suggested explaining the morphological basis of color vision in visual centers. The book is intended for physiologists, morphologists, neuropathologists and neurocyberneticists.

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Card 1/3 UDC: 611.814.4+611.814.7]-018-019

ACC NR: AM6015332

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SUB CODE: 06/ SUBM DATE: 03Nov65/ ORIG REF: 044/ OTH REF: 130

REYSLER, Yuriy Veniaminovich; NIKOLAYEV, Yuriy Alekseyevich; SHKOL'NIKOV, A., red.; ROZIN, M., red.; USTINOVA, S., tekhn. red.

[Over-all mechanization of pea harvesting]Kompleksnaia mekhanizatsiia uborki gorokha. Moskva, Mosk. rabochii, 1962. 93 p. (MIRA 15:10)
(Peas--Harvesting)

VOYTOV, Pavel Ivanovich, kand. sel'skokhoz. nauk; ROZIN, M., red.; SHKOL'NIKOV, A., red.; KUZNETSOVA, A., tekhn. red.

[Machines and attachments for the placement of liquid fertilizers] Mashiny i prisposobleniia dlia vneseniia zhidkikh udobrenii. Moskva, Mosk. rabochii, 1963. 85 p. (MIRA 16:6)
(Fertilizer spreaders)

SHTOL'NIKOV, A.A.

Railroad car used for giving instruction in electric traction.
Elek. i tepl. tiaga 2 no.3:3 of cover Mr '58. (MIRA 11:4)
(Electric railroads--Study and teaching)

SHKOL'NIKOV, A.A.

Useful equipment for repairing locomotives. Elek.i tepl.tiaga 3 no.5:18-19 My '59. (MIRA 12:9)

1. Starshiy inzhener TSentral'nogo doma tekhniki zheleznodorozhnogo transporta.
(Locomotives--Maintenance and repair)

SHKOL'NIKOV, A.A., inzh.

Textolite washers for brush holders. Elek.i tepl.tiaga 4 no.2:9 F '60. (MIRA 13:6)
(Electric railway motors)

SHKOL'NIKOV, A.A., inzh.

Pneumatic shears for cutting contact plates of the pantograph.
Elek.i tepl.tiaga 6 no.4:8 Ap '62. (MIRA 15:5)
(Electric railroads--Equipment and supplies)

SHUGAROV, A.I., prof.; SHKOL'NIKOV, A.B., red.; MAKHOVA, N.M., tekhn. red.; PEVZNER, V.I., tekhn. red.

[Physics] Fizika. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 419 p. (MIRA 15:3)
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[Use of petroleum products on state and collective farms] Neftekhoziaistvo sovkhozov i kolkhozov. Moskva, Sel'khozizdat, 1962. 302 p. (MIRA 15:9)
(Petroleum products) (Fuel) (Lubrication and lubricants)

KOROLENKO, Ivan Ivanovich; VESNA, Nikolay Mitrofanovich; SHKOL'NIKOV, A.B., red.; PEVZNER, V.I., tekhn.red.

[Aleksandr Gitalov's school] Shkola Aleksandra Gitalova. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 35 p. (MIRA 13:6)
(Gitalov, Aleksandr Vasil'yevich)
(Kirovograd Province--Socialist competition)

SHATS, Yefim L'vovich; ENTIN, Isaak Arkad'yevich; SHKOL'NIKOV, A.B., red.; PEVZNER, V.I., tekhn.red.

[Power equipment of repair and supply stations and state farms; arrangement, operation, and repair] Energosilovoe oborudovanie RTS i sovkhozov; ustroistvo, ekspluatatsiia i remont. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 351 p. (MIRA 12:8)
(Electric power plants--Equipment and supplies)
(Repair and supply stations) (State farms)

GEL'MAN, Boris Mikhaylovich; KRAYEVSKAYA, Ye.K.; MOSKVIN, M.V.; ALISANOV, B.I.; AL'GIN, B.P.; VODOLAZHCHENKO, Yu.T.; LEVITANUS, A.D.; SHKOL'NIKOV, A.B., red.; BALLOD, A.I., tekhn.red.

[Wheeled diesel tractors] Dizel'nye kolesnye traktory. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 423 p. (MIRA 13:2)
(Tractors)

ETERLEY, Nikolay Semenovich; POTEKHIN, Aleksey Andreyevich; SHKOL'NIKOV, A.B., red.; DEYEVA, V.M., tekhn.red.

[Electric machinery] Elektricheskie mashiny. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 299 p. (MIRA 13:6)
(Electric machinery--Study and teaching)

MIKHAYLOVSKIY, Yevgeniy Vasil'yevich; TSIMBALIN, Viktor Borisovich; SHKOL'NIKOV, A.B., red.; PEVZNER, V.I., tekhn.red.

[Theory of tractors and automobiles] Teoriia traktora i avtomobilia. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 335 p. (MIRA 13:11)

(Tractors) (Automobiles)

DOLZHENKOV, A.T., kand.tekhn.nauk, red.; SHKOL'NIKOV, A.B., red.;
GOR'KOVA, Z.D., tekhn.red.

[Training in repairing tractors, motor vehicles, and agricultural machinery] Praktikum po remontu traktorov, avtomobilei i sel'skokhoziaistvennykh mashin. Moskva, Gos. izd-vo sel'khoz.lit-ry, 1960. 431 p.
(MIRA 14:2)

(Tractors--Maintenance and repair)
(Motor vehicles--Maintenance and repair)
(Agricultural machinery--Maintenance and repair)

YATCHENKO, Semen Vasil'yevich; SHKOL'NIKOV, A.B., red.; ZUBRILINA, Z.P., tekhn.red.

[Machining on lathes] Tokarnoe delo. Izd.9., perer., dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 493 p. (MIRA 13:6)
(Turning)

SAZONOV, N.A.; SHKOL'NIKOV, A.B., red.; PEVZNER, V.I., tekhn.red.

[Manual for rural electricians] Rukovodstvo dlia sel'skogo elektromontera. Izd.5., perer. i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 532 p. (MIRA 13:12)
(Electricians--Handbooks, manuals, etc.)
(Electricity in agriculture)

GUREVICH, A.M.; SOROKIN, Ye.M.; SHKOL'NIKOV, A.B., red.; GOR'KOVA, Z.D., tekhn. red.; TRUKHINA, O.N., tekhn. red.

[Tractors and motor vehicles] Traktory i avtomobili. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 567 p. (MIRA 15:3)
(Tractors) (Motor vehicles)

GUDKOV, Aleksandr Nikolayevich, prof., doktor tekhn. nauk;
SHKOL'NIKOV, A.B., red.; BELOVA, N.N., tekhn. red.

[Some problems of mechanization in agriculture]Nekotorye problemy mekhanizatsii sel'skokhoziaistvennogo proizvodstva. Moskva, Sel'khozizdat, 1962. 45 p. (MIRA 16:2)
(Agricultural machinery)

OKOROKOV, N.I.; BARANOV, V.V.; SEMENOV, V.M.; SHKOL'NIKOV, A.B., red.; GUREVICH, M.M., tekhn. red.

[Farm mechanization and electrification] Mekhanizatsiia i elektrifikatsiia sel'skogo khoziaistva. Moskva, Sel'khozizdat, 1962. 415 p. (MIRA 15:7)
(Farm mechanization) (Electricity in agriculture)

BLAGOVESHCHENSKIY, Georgiy Viktorovich; SHKOL'NIKOV, A.B., red.; SOKOLOVA, N.N., tekhn. red.

[Principles of safety and fire prevention technique in agriculture] Osnovy tekhniki bezopasnosti i protivopozharnoi tekhniki v sel'skom khoziaistve. Moskva, Sel'khozizdat, 1963. 279 p. (MIRA 16:10)
(Agriculture--Safety measures)
(Fire prevention)

GUREVICH, A.M.; SOROKIN, Ye.M.; SHKOL'NIKOV, A.B., red.

[Tractors and motor vehicles] Traktory i avtomobili. Izd.3., ispr. i dop. Moskva, Izd-vo "Kolos," 1964. 543 p. (MIRA 17:5)

LEBEDEV, B.M., kand. tekhn. nauk; PRONIN, V.N., inzh., retsenzent; SHKOL'NIKOV, A.B., inzh., red.

[Sprinklers; theory and construction] Dozhdeval'nye mashiny; teoriia i konstruktsii. Moskva, Mashinostroenie, 1965. 254 p. (MIRA 18:10)

SHKOL'NIKOV, ALEKSANDR DMITRIYEVICH, assistent

Concerning the limits of the application of S.A.C haplygin's theorem to some nonlinear equation of the motion of electromechanical systems. Izv. vys. ucheb. zav.; elektromekh. 4 no.11:3-8 '61. (MIRA 14:12)

1. Kafedra avtomatizatsii proizvodstvennykh protsessov Leningradskogo gornogo instituta.

(Differential equations)
(Electronic calculating machines)

16.3900
16.6.00

S/044/62/000/006/077/127
B168/B112

AUTHOR: Shkol'nikov, A. D.

TITLE: Use of S. A. Chaplygin's theorem for estimating the error in values given by analog computers

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 26, abstract 6V134 (Zap. Leningr. gorn. in-ta, v. 45, no. 1, 1961, 60-64)

TEXT: A simple scheme is proposed for the construction, by means of small analog computers, of functions satisfying the differential inequalities corresponding to ordinary differential equations. On the basis of lemma 3 and theorem 5 published in RZhMat, 1959, 594, a theorem is derived which enables to determine from the form of a comparison function (satisfying the differential inequality) the limit of applicability of Chaplygin's theorem concerning the differential inequality and to obtain an estimate of the disposition of the solution of the differential equation by means of analog computers. [Abstracter's note: Complete translation.]

Card 1/1

SHKOL'NIKOV, A.D.

Concerning the application of Chaplygin's theorem. Radiotekh. i elektron. 7 no.3:576 Mr '62. (MIRA 15:2)
(Electric networks)
(Differential equations)

TEREKHOV, G.A.; SHKOL'NIKOV, A.D.

Electric modeling of periods of the working cycle of a percussion air drill. Zap. LGI 47 no.1:30-36 '62. (MIRA 16:5)
(Boring machinery--Electromechanical analogies)

SHKOL'NIKOV, A.D.

Computor technique of determining the usefulness of S.A. Chaplygin's theorem. Zap. LGI 47 no.1:96-99 '62. (MIRA 16:5)
(Inequalities (Mathematics)) (Electronic computors)

GUDKOV, A.V., inzh.; SHKOL'NIKOV, A.D., inzh.

Study of the use of calculating machines in regulating movement in open-pit haulage. Gor.zhur. no.2:46-48 F '63. (MIRA 16:2)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo transporta (for Gudkov). 2. Leningradskiy gornyy institut (for Shkol'nikov).
(Mine railroads) (Calculating machines) (Automatic control)

TEREKHOV, G.A., inzh.; SHKOL'NIKOV, A.D., assistent

Electronic simulation of the working cycle of an air drill. Izv. vys. ucheb. zav.; gor. zhur. 6 no.4:68-78 '63. (MIRA 16:7)

1. Leningradskiy ordena Lenina i ordena Trudovogo krasnogo Znameni gornyy institut imeni G.V. Plekhanova. Rekomendovana kafedroy gornoelektromekhanicheskogo tsikla.
(Boring machinery--Models)

SHKOL'NIKOV, A.D., kand. tekhn. nauk

Industrial testing of the model of a system for the operative control of strip mine operations. Gor. zhur. no.11:58-61 N '64. (MIRA 18:2)

1. Leningradskiy gornyy institut.

SHKOL'NIKOV, A.D., kand. tekhn. nauk

The task of drawing up an operative plan. Izv. vys. ucheb. zav.; gor. zhur. 8 no.2:7-12 '65. (MIRA 18:5)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni gornyy institut imeni G.V.Plekhanova.

SILANT'YEV, A.

USSR/Physics - Gamma Radiation 11 Sep 52

"Gamma Radiation of Sb^{124}," K. Gromov, B. Dzhelepov, N. Zhukovskiy, A. Silant'yev, Yu. Khol'nov

"Dok Ak Nauk SSSR" Vol 86, No 2, pp 255-258

By means of the gamma spectrometer that employs the Compton electron, the authors investigate gamma radiation of subject antimony isotope, under conditions similar to those of the investigation of gamma spectra of Co^{60} and Ag^{110} in 1951 by the authors. The source of gamma rays was activated metallic antimony in the amt of 0.7 gram. Discuss exptl curve of current strength in an electromagnet versus number of coincidences per unit of time. Submitted by Acad P. I. Lukirskiy 2 Jul 52

235T98

USSR/Physics - Gamma-Spectrum of Br^{82} - 21 Jul 52

"The Gamma-Ray Spectrum of Br^{82}," B. Dzhelepov, A. Silant'yev, Radium Inst, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol 85, No 3, pp 533-535

Investigates the gamma-ray spectrum of Br^{82} with the aid of the Radium Institute's gamma spectrometer ("ritron"), which was described by B. S. Dzhelepov and M. Orbeli ("Dok Ak Nauk SSSR" Vol 62, 615, 1948). Gives a table showing the energy and intensity of the gamma rays of Br^{82} in comparison with foreign results. Acknowledges assistance of N. N. Zhukovskiy, Yu. V. Khol'nov, and K. Gromov. Submitted by Acad P. I. Lukirskiy 14 May 52.

235T88

235T88

SILANT'YEV, A.

SHKOL'NIKOV, A. S. and KANTOR, S. A.

"Portable and Economical Instruments for the Radioactive Survey Methods," Utilization of Radioactive Isotopes & Emanations in the Petroleum Industry (Symposium), Min. Petroleum Industry USSR, 1957.

Results of the Joint Session of the Technical Council of Min of the Petroleum Industry USSR and Soviet Sci and Technical Association, Moscow 14-19 Mar 1956.

SOV/93-58-11-4/15

11(0)
AUTHOR: Yerozolimskiy, B.G., Voytsik, L.R., Popov, N.V., and Shkol'nikov, A.S.

TITLE: New Oilfield Exploration Methods Employing Pulse Generating Neutron Sources (Novyye metody issledovaniya burovykh skvazhin, osnovannyye na ispol'zovanii impul'snykh neytronnykh istochnikov)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 11, pp 21-28 (USSR)

ABSTRACT: The article notes the development of neutron generators for radioactivity well logging in the Soviet Union and America [Ref 1-4] and analyzes the possible employment of such units in pulse operation as well as the development of new exploration methods based on pulse generating neutron sources which will enable one to study the unsteady processes of neutron and reservoir rock interaction. Understanding of the processes taking place in the medium around the source after its emission of a short pulse of neutrons [Ref 5,6] will make it possible to find the ways of utilizing the pulse method for solving the geophysical problems of oilfields. One of these possible methods is the determination of the formation's porosity and its fluid mineralization by measuring the nonstationary field of thermal neutrons. This requires finding the dependence of the thermal neutron stream on the time which is presented by Fig. 2 as the curve of n(t), where n is the number of thermal neutrons registered by the tracer and t - the time.

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Function n(t) is computed from the theory of diffusion [Ref 7] and expressed by the formula $n(t) = \frac{C}{(Dt)^{3/2}} e^{-\frac{r^2}{4Dt}} + \frac{t}{\tau}$, where D is the coefficient of neutron diffusion in a medium depending primarily on the reservoir rock's hydrogen content and τ - the life span of the thermal neutrons depending somewhat on the hydrogen content and to a greater extent on the water mineralization due to its chlorine content. Among the other possible new methods that can be developed with impulse generating neutron sources are those which may be based on measuring the slowing down time of the neutrons, as well as on determining which reservoir rock contain carbon by means of inelastic scattering gamma ray spectra [Ref 8-10]. The unit employed in oilfield exploration methods based on pulse generating sources is presented by Fig. 1. There are 2 figures and 10 references, 4 of which are Soviet and 6 English.

SHKOL'NIKOV, A.S.

PHASE I BOOK EXPLOITATION SOV/5600

Yadernaya geofizika; sbornik statey po ispol'zovaniyu radioaktivnykh izlucheniy v geologii nefti (Nuclear Geophysics; Collection of Articles on the Use of Radioactive Radiation and Isotopes in Petroleum Geology) Moscow, Gostoptekhizdat, 1959. 370 p. Errata slip inserted. 4,000 copies printed.

Ed.: P.A. Alekseyev, Professor, Doctor of Geological and Mineralogical Sciences; Exec. Ed.: A.P. Kalmatarov; Tech. Ed.: A.S. Polosina.

PURPOSE: This book is intended for petroleum geologists, geophysicists and scientists engaged in geological research who are interested in radiometric techniques of petroleum prospecting.

COVERAGE: The collection contains 28 articles compiled by staff members and aspirants of the Laboratory for Nuclear Geology and Geophysics of the Petroleum Institute (now the Institute for Geology and Mineral Fuel Processing) of the Academy of Sciences USSR, the Laboratory for Radioactive Logging of the All-Union Scientific Research Institute of Geophysics, and the heads of councils for planning research projects for petroleum enterprises. The articles treat new material on radiometric surveying in petroleum geology, describe radiometric instruments (counters, etc.) for registering neutrons and gamma rays, give the results of research with models of rock strata, introduce fundamentals of a new method for effectively utilizing radioactivity in the analysis of rock samples from petroleum-survey bore holes, etc. Problems of method in the study and interpretation of radiometric measurements in bore holes are reviewed, as well as the results of studies in the nonabsorption of tritium in tracing the movement of petroleum and water in a stratum. Finally, a new method of surveying based on measuring the radioactivity of the surface of a prospective petroleum deposit is described. No personalities are mentioned. References accompany each article.

Grushkov, A.P., V.V. Matveyev, G.S. Scanov, and A.D. Sokolov. Radiometric Analyzer "Avtograf" and Its Use in Radiometric Oil and Gas Prospecting 279

Matveyev, V.V., and A.D. Sokolov. Scintillation Liquid Radiometer-Analyzer "Avtograf" for Aerial Prospecting 290

Grushkov, A.P. Experiment in the Separate Registration of the Thorium and Radium Components of Gamma Radiation When Prospecting With Automobile-Mounted Radiometers 300

Filippov, Ye. M. Some Problems in the Methodology and Theory of the Gamma-Gamma Method 306

Zolotov, A.F. Effective Cross Sections of Chlorine for Slow Neutrons 332

Yeroshchakhin, B.O., and A.S. Shchelkunov. Method of Separating Oil- and Water-Bearing Strata, Based on Use of a Pulsating Neutron Source 337

Bespalov, P.F., and A.I. Faustov. A High Voltage Source of 100 Kv for Neutron Generators Used in Cased Wells 346

Yeroshchakhin, B.O., L.M. Bondarenko, L.R. Voytsik, Yu. S. Shishlevich, and L.I. Yulin. A Small-Sized Seamless Neutron Tube 351

Voytsik, L.R., and B.G. Yeroshchakhin. A Laboratory Neutron Generator 356

AVAILABLE: Library of Congress

SHKOL'NIKOV, A.S.

S/169/61/000/011/027/065
D228/D304

AUTHORS: Alekseyev, F.A., Yerozolimskiy, B.G., Bespalov, D.F., Bondarenko, L.N., Boytsik, L.P., Popov, N.V., Khaustov, A.I., Romanovskiy, V.F., Shimelevich, Yu.S. Shkol'nikov, A.S., and Yudin, L.I.

TITLE: The result of applying neutron impulse methods and apparatus for investigating borehole logs

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1961, 34, abstract 11A304 (V sb. Yadern. geofiz. pri poiskakh polezn. iskopayemykh, M., Gostoptekhizdat, 1960, 3-20)

TEXT: A borehole impulse generator of neutrons is described together with the method of impulse-neutron neutron-logging (INNL). A description is given for the electronic layout of the borehole generator of neutrons and the surface appratus for impulse neutron logging. During laboratory tests of the generator a stable mean neutron yield of $\sim 2 \times 10^7$ neutr./sec. was obtained at 100 kv. of accelerating voltage in the tube. The impulse duration amounted to 100

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The result of [illegible] ...

μsec, the transmission frequency being 400 c/s. The neutron generator was used in the commercial testing of INNL. INNL readings against oil-bearing beds exceed by 10 times those for aquiferous beds containing mineralized water, at a delay time of 1000 μsec. Certain impediments and limitations of thermal impulse neutron-logging in different oil- and water-saturated beds are indicated, and the requirements for the apparatus are stated. Further prospects are indicated for the application of impulse neutron generators. [Abstractor's note: Complete translation].

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85464

S/089/60/009/002/019/019/XX
B006/B059

21.7100

AUTHORS: Yerozolimskiy, B. G., Shkol'nikov, A. S., Isakov, A. I.

TITLE: Use of a Pulsed Neutron Source for Investigations in Petroleum Boreholes

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 2, pp. 144 - 145

TEXT: The present "Letter to the Editor" contains details on theory and results of model experiments with miniature accelerating tubes serving as pulsed neutron sources for radioactive core sampling of boreholes. The simplest method of rock sampling is based upon measurement of the time dependence of thermal neutron density in the rock, i.e., determination of neutron lifetime in the rock. This method is suitable for determining mineral oil or water in a seam. If, for example, a sandy layer contains 20% water with 200g/l of dissolved salts, then the thermal neutron lifetime τ in such a medium is 250 μsec, and 570 μsec if this sandy layer contains 20% of mineral oil. This fact is used to determine the position of an oil-water boundary layer by means of constant neutron sources. In the case of such neutron sources, the measured neutron distribution around

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Use of a Pulsed Neutron Source for Investigations in Petroleum Boreholes

S/089/60/009/002/019/019/XX
B006/B059

the source is proportional to the lifetime in the medium, whereas in the case of pulsed sources, the measured function n(t) is related to τ by a factor $e^{t/\tau}$, i.e., the relationship between measured quantity and τ is much more distinct than in the case of measurements in a steady field. Measurements with a pulsed neutron source were made on rock-bed models using the methods described in Refs. 1 and 8. Fig. 1 shows the curves of measurements (neutron density versus time) made in borehole models of concrete, sand, paraffin, and salts. A BF_3 filled proportional counter served as a thermal neutron indicator. The pulses from the counter were fed into a 100-channel time analyzer. A deuteron acceleration tube with a tritium target was used as a neutron source (14 Mev), giving 5-μsec neutron pulses at a frequency of 300 cps. Fig. 2 shows the model with source and counter. The results of the investigation showed that between the "petroleum" and the "water" containing model (sand+paraffin and sand+paraffin+salts, respectively) the recording of the indicator at t = 800 μsec differed by the ten-fold. In contrast to this, the usual methods of neutron core sampling show a difference of only 40 to 50%. The difference is in agreement with theoretical estimates. The results

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Use of a Pulsed Neutron Source for Investigations in Petroleum Boreholes

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show that this new method is very convenient in determining the water - petroleum boundary. The authors thank G. N. Fleroy for discussions and stimulations, as well as I. M. Frank and F. L. Shapiro for assistance. There are 2 figures and 8 references: 5 Soviet and 3 US.

SUBMITTED: July 15, 1959

X

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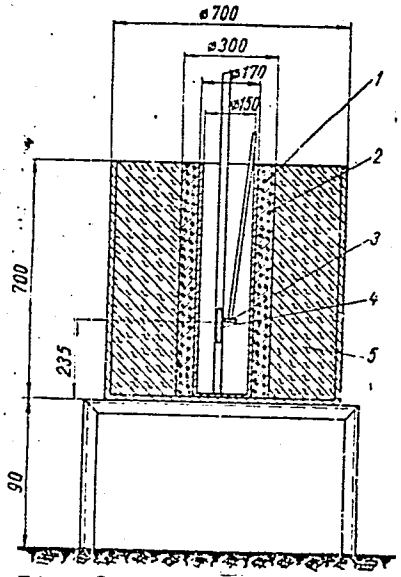

Legend to Fig. 2: 1 - drive pipe, 2 - cement ring, 3 - target, 4 - counter, 5 - sand+paraffin (and salt) mixture.

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SHKOL'NIKOV, A.S.

Using neutron-neutron pulse logging for determining the water-oil contact in cased wells. Neft.khoz. 38 no.8:13-19 Ag '60.
(MIRA 13:8)

(Oil well logging, Radiation)

SHKOL'NIKOV, A. S.

Cand Tech Sci - (diss) "Development of the bases of impulse neutron-neutron logging, and methods of its application for differentiation of rocks as to petroleum-water saturation." Novosibirsk, 1961. 19 pp; (Academy of Sceences USSR, Siberian Division, Joint Academic Council for Phys-Math and Tech Sci); 220 copies; price not given; (KL, 10-61 sup, 220)

SHKOL'NIKOV, A.S.

PHASE I BOOK EXPLOITATION SOV/5592

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniy v narodnom khozyaystve SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy Vsesoyuznogo soveshchaniya 12 - 16 aprelya 1960 g. g. Riga, v 4 tomakh. t. 4: Poiski, razvedka i razrabotka poleznykh iskopayemykh (Radioactive Isotopes and Nuclear Radiation in the National Economy of the USSR; Transactions on the Symposium Held in Riga, April 12 - 16, 1960, in 4 volumes. v. 4: Prospecting, Surveying, and Mining of Mineral Deposits) Moscow, Gostoptekhizdat, 1961. 284 p. 3,640 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR. Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'zovaniyu atomnoy energii

Eds. (Title page): N. A. Petrov, L. I. Petrenko, and P. S. Savitskiy; ed. of this volume: M. A. Speranskiy; Scientific ed.: M. A. Speranskiy; Executive Eds.: N. N. Kuz'mina and A. G. Ionel';

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Radioactive Isotopes and Nuclear (Cont.) SOV/5592

Tech. Ed.: A. S. Polosina.

PURPOSE : The book is intended for engineers and technicians dealing with the problems involved in the application of radioactive isotopes and nuclear radiation.

COVERAGE: This collection of 39 articles is Vol. 4 of the Transactions of the All-Union Conference of the Introduction of Radioactive Isotopes and Nuclear Reactions in the National Economy of the USSR. The Conference was called by the Gosudarstvennyy nauchno-tekhnicheskiy komitet Sovet Ministrov SSSR (State Scientific-Technical Committee of the Council of Ministers of the USSR), Academy of Sciences USSR, Gosplan SSSR (State Planning Committee of the Council of Ministers of the USSR), Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers of the USSR for Automation and Machine Building), and the Council of Ministers of the Latvian SSR. The reports summarized in this publication deal with the advantages, prospects, and

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development of radioactive methods used in prospecting, surveying, and mining of ores. Individual reports present the results of the latest scientific research on the development and improvement of the theory, methodology, and technology of radiometric investigations. Application of radioactive methods in the field of engineering geology, hydrology, and the control of ore enrichment processes is analyzed. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Alekseyev, F. A. Present State and Future Prospects of Applying the Methods of Nuclear Geophysics in Prospecting, Surveying, and Mining of Minerals 5

Bulashevich, Yu. P., G. M. Voskoboynikov, and L. V. Mizyukin. Neutron and Gamma-Ray Logging at Ore and Coal Deposits 19

Gordeyev, Yu. I., A. A. Mukher, and D. M. Srebrodol'skiy. The

Radioactive Isotopes and Nuclear (Cont.) SOV/5592

Present State of Radiometric Methods and Their Efficiency in Studying Geological Sections of Petroleum, Gas, Ore, and Coal Boreholes 30

Speranskiy, M. A. Application of Radioactive Methods in the Exploration and Prospecting of Coal Deposits 34

Zaporozhets, V. M., and B. I. Rogov. Radiometric Equipment for the Investigation of Boreholes 40

Mikheyev, G. F., and N. G. Feytel'man. Economic Effect of the Application of Radiometric Methods in Prospecting, Surveying, and Exploitation of Oil and Gas Deposits 47

Alekseyev, F. A., D. F. Bespalov, B. M. Burov, B. S. Yerozolimskiy, N. V. Popov, Yu. S. Shimelevich, and A. S. Shkol'nikov. Pulse-Type Neutron Method for Investigating the Geological Sections of Boreholes 55

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ALEKSEYEV, Fedor A., [illegible], D. F., [illegible], Yu. S.
SHKOLNIKOV, A. S. and [illegible], D. M.

"The Neutron-neutron Pulse Well-logging."

report to be submitted for the Conference on Nuclear Geophysics, Krakow, Poland, 24-30 Sept 1962.

SHKOL'NIKOV, B.

Courses of development of cooperative societies of the Chuvash S.S.R. Prom. koop. 12 no.10:6-7 O '58. (MIRA 11:10)

1. Zamestitel' nachal'nika planovo-ekonomicheskogo upravleniya Rospromsoveta.
(Chuvashia--Cooperative societies)

ZAVALII, Pavlo Volodimirovich; IGOSHKIN, Georgiy Stepanovich [Ihoshkin, H.S.]; SHENDRIK, Lyudmila Karpo na [Shendryk, L.K.], red.; SHKOL'NIKOV, B., red.; SHUSTER, A., red.

[Get acquainted with the Ukraine] Poznaiomtes' z Ukrainoiu. Kyiv, Mystetstvo, 1964. 1 v. (MIRA 18:10)

SHKOL'NIKOV B. M.

Shkol'nikov B., "Use of Automatic Regulators in Drilling for Oil and Gas," Byulletin tekhniko-ekonomicheskoy informatsii [Technical and Economic Information Bulletin], 1953, No 5, Pages 9-10, 1 figure.

SHKOL NIKOV, B.M.

16400* (Automatic Drill Regulator, Type BAR-150.) Burovoi avtomaticheskii regulliator tipa BAR-150. B. M. Shkolnikov and I. I. Sud. *Energeticheskii Biulleten*, 1954, no. 7, July, p. 1-9.

Design and performance of instrument governing maintenance of given load on drill bit. Diagrams, graphs.

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(1)

SHKOL'NIKOV, B.M.

AID P - 1661

Subject : USSR/Electricity - Engineering

Card 1/2 Pub. 28 - 1/9

Authors : Sulkanishvili, I. N. and Shkol'nikov, B. M.

Title : On the article "On efficiency of electric drive used for drilling oil wells" (Published in Energ. byul., No.1, 1955)

Periodical : Energ. byul., 2, 1-4, F 1955

Abstract : The authors discuss and minutely analyze the original article on improvement of drilling oil well machinery, and make the following suggestions: 1) several electric drive models should be designed and built for shallow, deep, and very deep wells instead of the present two; 2) the hoists and rotary tables should be operated by a high-voltage electric drive; 3) an independent drive should be added for auxiliary operation in lowering and hoisting tools; 4)the hoist and rotary

AID P - 1661

Energ. byul., 2, 1-4, F 1955

Card 2/2 Pub. 28 - 1/19

table drive mechanisms should have electromagnetic couplings; 5) there should be individual electric control equipment at a drilling site; 6) the AC drives should be used for diesel drilling outfits 7) the mud pumps should have a variable-speed drive.

Institution: None

Submitted : No date

SHKOL'NIKOV, B.M.

AID P - 1891

Subject : USSR/Electricity-Engineering

Card 1/1 Pub. 28 - 3/7

Authors : Sulkhanishvili, I. N. and Shkol'nikov, B. M.

Title : Controlled electric drive for mud pumps in turbine drilling

Periodical : Energ. byul., no.4, 15-20, Ap 1955

Abstract : The authors discuss the problem of obtaining higher efficiency from an electric drive and mud pump used in turbine oil drilling. Three practical suggestions to improve turbine drilling are made. Six diagrams.

Institution: None

Submitted : No date

AID P - 3040

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 27/33

Authors : Shkol'nikov, B. M., Eng. and I. I. Sud

Title : Automatic drilling regulator (Review of technical periodicals)

Periodical : Elektrichestvo, 7, 146-147, Jl 1955

Abstract : The authors summarize data from two Soviet periodicals, and give a description of the regulator with one diagram, 2 Soviet references (1954).

Institution : None

Submitted : No date

SULKHANISHVILI, I.N.; SHKOL'NIKOV, B.M.

Drilling rig drive with electromagnetic clutches. Energ.biul. no.2:11-17 F '56. (MLRA 9:5)
(Oil well drilling--Equipment and supplies)

SUD, I.I.; SHKOL'NIKOV, B.M.

New system for controlling the feed of the bit in electric drilling.
Energ.biul.no.3:17-23 '56. (MIRA 9:7)
(Oil well drilling--Equipment and supplies) (Electric controllers)

SHKOL'NIKOV, B.M.; SUD, I.I.

Improved characteristics of bottom electric motors driving the bit. Energ.biul.no.7:20-24 Jl '56. (MLRA 9:10)
(Electric motors) (Oil well drilling--Equipment and supplies)

[illegible]KOV, [illegible], Cand Tech Sci -- (diss) "[illegible] of [illegible] of

[illegible] tion [illegible] ~~in the~~ chisel in drilling [illegible] by ~~and~~ [illegible] el [illegible] drills."

[illegible], 195[illegible]. [illegible] pp (Min of Higher Education USSR. Azerbaydzhan Order of

Labor Red Banner Industrial Inst im M. Azizbekov), 150 copies

([illegible], [illegible], [illegible])

-/

AUTHORS: Shkol'nikov, B. M., Engineer, Sud, I. I. Engineer 105-58-6-18/33

TITLE: Some Properties and the Computation of a Multi-Motor Drive System With a Mechanical Differential (Nekotoryye svoystva i raschet sistemy mnogodvigatel'nogo privoda s mekhanicheskim differentsialom)

PERIODICAL: Elektrichestvo, 1958, Nr 6, pp. 69-74 (USSR)

ABSTRACT: Here the way of computing and selecting the gear rations of the electric engines of the electric drive are given according to the diagram of connections as shown here, and on the basis of the experience made in the operation, in comparison to other known diagrams of connections. In the diagram of connections shown here one asynchronous motor K with shunted rotor and one d.c. dynamo D drive two driving shafts of the gear. Simultaneously the motor K drives another d.c. dynamo G. The dynamo D andG are coupled according to the diagram of connections generator-motor. Their excitation is independent. The engine K is fed by the alternative-current net. Analogous diagrams of connections are used by the firm "Speed Control" (USA) First the selection of the gear ratio is treated. It is shown that with given load moment M_W at the initial shaft of the gear the value of the load moment at the shaft of the dynamo D,

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M_D, can be determined with a certain exactness according to the angular factor of this straight line. M_D determines the weight, the dimensions and the costs of the dynamo D. Analogously the section separated from the n_W axis (velocity of the initial shaft of the gear) by this line characterizes the output of the engine K. In the investigation of the reduction factor for the moments of inertia and resistance it is shown that the moments of inertia that are reduced to the differential bridge are reduced to the driving gear wheels by division with the constant factor $k^2_{drive} = 4$. The moments of resistance are reduced by means of the same factor $k_{drive} = 2$. For the selection of the engine the functional diagram of connection of the drive is used. The formulae necessary for the computation of the moments of the engine are given in tabular form. For the characteristic mechanical properties of the drive in general form the equation (15) is given. The velocity of the driven shaft of the gear is controlled by variations of the excitation in the dynamos G and D. For the efficiency of the gear the equation (16) is given. The advantages of the system as described

here are: 1) The possibility of obtaining any small rotational speed at the control shaft without increasing the velocity at the driving shaft up to values undesired because of the cooling of the motor. 2) The possibility of reversing the control shaft without reversing the direction of rotation in the electric engines. 3) The possibility of obtaining a wide range for the variation of the speed at the control shaft at a comparatively small range of speed regulation in the electric engines. - Among the disadvantages of such drives are the low efficiency in the operation with characteristic control curves and the comparatively complicated gear construction. There are 3 figures, 2 tables, and 5 references, 4 of which are Soviet.

ASSOCIATION: Giproneftemash Gosplana RSFSR(Giproneftemash Gosplana RSFSR)

SUBMITTED: December 27, 1957

1. Electric motors--Performance 2. Mechanical drives--Design
3. Mechanical drives--Control 4. Mathematics

AUTHORS: Shkol'nikov, B. M., Engineer, SOV/105-58-7-31/32
Sud, I. I., Engineer

TITLE: K. N. Kulizade. "Electric Equipment for Oil Drilling" (K. N. Kulizade. Elektrooborudovaniye dlya bureniya neftyanykh skvazhin)

PERIODICAL: Elektrichestvo, 1958, Nr 7, pp. 94 - 94 (USSR)

ABSTRACT: This is a review. Second revised and enlarged edition. 621 pages, price 22.75 Roubles. "Aznefteizdat" publishing house, 1957. The book is intended for students of the department of oil fields at the petroleum institutes. Chapter I - VII: Short history of the development of Soviet electrical equipment in the boring aggregates. General data on electric power. Chapter VIII - XXII: data on the electric equipment of the boring plants, i. e.: chapter VIII: fundamental requirements for electric drives, as well as on the separate drives (table, winch, pumps). Chapter IX: load diagrams of the boring- and hoisting motors. Chapter X, XI, and XII gives a good survey of the calculation formulae for the determination of the power of the electromotor. Chapter XIII: properties and characteristics of Diesel-electric drives of

Card 1/2

K. N. Kulizade. "Electric Equipment for Oil Drilling" 105-58-7-31/32

boring plants and circuits which were worked out in the course of the last years by the Gipronefteмash, Uralmashzavod and the TsKB "Elektroprivod". Chapter XIV: demands on the plants for automatic thrust of the cutting head. Chapter XV: electric drill. Chapter XVI - XVIII: description of the control circuit. Chapter XIX: safety devices. Chapter XX - - XXI: of the Electric supply circuits and illumination circuits. Chapter XXII: an ingenuous method for the standardization of the electric energy consumption according to the bore hole advance. Enclosure : table of breakdowns and measures for their elimination.

ASSOCIATION: Gipronefteмash (Gipronefteмash)

1. Drilling machines--Applications 2. Electrical equipment --USSR

Card 2/2

ZHEVAGO, Konstantin Aleksandrovich; PORTNOY, Teodor Zinov'yevich; SEKOL'NIKOV, Bernard Markovich. Prinimal uchastiye SUD, I.I.. MARTYNOVA, M.P., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Boring equipment drives] Privod burovykh ustanovok. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 362 p. (MIRA 13:6)

(Boring machinery)